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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,078

Applicant(s)

WENNINGER ET AL.

Examiner

ANISH DESAI

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

1. Applicant's arguments in response to the Office action dated 10/17/07 have been fully considered.
2. Claims 1, 3-17 are pending. Claim 2 is cancelled and claims 14-17 are new claims. Support for new claims is found in the specification.
3. All of the previously made art rejections are maintained.

Election/Restrictions

4. Newly submitted claim 17 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 17 is directed to a method of preparing adhesive tape (process claim). Applicant has previously received an action on the merits for claims directed to an article (i.e. an adhesive tape). Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 17 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 5-8, 10, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hishida (English translation of JP 05-202342) in view of Marongiu (US 4,503,184), substantially as set forth in the Section 6 of 10/17/07 Office Action.

6. With regards to claim 1, Hishida discloses an adhesive tape having poly vinyl chloride film comprising 20 to 60 parts by weight of plasticizer (claim 1 and 0016) and an adhesive agent layer coated on both surfaces of the poly vinyl chloride film (claim 1). Additionally, Hishida discloses that the plasticizer used of the present invention also shifts to the adhesive agent layer and improves the initial adhesive strength immediately after lamination in addition to giving softness to the base material (0013). The adhesive agent layer of Hishida is formed of acrylic resin (claim 2).

7. The difference between the claimed invention and the prior art of Hishida is that Hishida is silent with respect to teaching the adhesive comprising aqueous dispersion of styrene-acrylic acid derivative copolymers having a styrene fraction of from 40 to 70% by weight. However, Marongiu discloses aqueous dispersion containing a mixture of a latex of a copolymer A of butadiene styrene and at least one unsaturated carboxylic acid, and a latex of a copolymer B of styrene and an alkyl acrylate, and if appropriate, at least one unsaturated carboxylic acid. The dispersion of Marongiu can be used as binders for the preparation of adhesive compositions suitable for joining or gluing two or more elements, and particularly suitable when at least one of the elements consists of a material which is difficult to glue such as polyvinyl chloride (abstract). The latex of copolymer B of Marongiu comprises about 30 to 60% styrene (column 1 lines 50-56). It is noted that primary reference of Hishida uses polyvinyl chloride as a backing film.

Additionally, Hishida discloses "The aforementioned acrylic resin type of the adhesive agent layer may be formed at least on one side of the base material, and another adhesive agent layer other than the aforementioned may be formed on the other side." (0023). However, Hishida does not specify another adhesive layer. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the aqueous adhesive dispersion of Marongiu to coat the polyvinyl chloride backing of Hishida, motivated by the desire to form an adhesive tape with a suitable adhesive that is compatible with polyvinyl chloride backing.

8. Regarding claim 3, the PVC sheet of Hishida is 50 μm thick (0027). With respect to claims 5-7, the term "up to" as recited is interpreted as including "0% by weight".

Thus, the reference of Hishida meets the claim requirement of claims 5-7.

9. With respect to claim 8, Hishida discloses use of a primer layer (adhesion promoter layer) (0004). Alternatively, it would have been obvious in Applicant's invention to provide a layer of adhesion promoter between the backing layer and the adhesive layer, motivated by the desire to enhance the adhesion of the backing layer to the adhesive. Providing an adhesion promoter (primer layer) is known in the adhesive art.

10. With respect to claim 10, Hishida discloses, "In the adhesive tape of the present invention...it is presumed that the stabilizer that has shifted has ion bonding or chelate bonding with the functional group in the adhesive agent when the metal-containing stabilizer shifts to the adhesive agent layer, which develops by crosslinking reaction and

improves the adhesive strength.” (0025), which reads on adhesive is crosslinked by chemical treatment as claimed.

11. Regarding claims 12 and 13, it is the Examiner's position that the adhesive tape of Hishida as modified by Marongiu is functionally capable of bunding, protecting, insulated, or sealing ventilation pies, wires, or cables (claim 12), and functionally capable of sheathing cable looms for vehicles or field coils for picture tubes (claim 13), because the adhesive tape of Hishida as modified by Marongiu is structurally and compositionally equivalent to Applicant's adhesive tape.

12. With respect to newly added claims 14 and 15, it is noted that Hishida discloses “Examples of the aforementioned plasticizer include dioctyl phthalate (DOP), dibutyl phthalate (DBP)...diaryl phthalate (DAP), for example.” (page 5 0015). Plasticizers such as dioctyl phthalate read on polymeric esters of phthalic acid. As to claim 16, in absence of unexpected results, selecting a combination of polymeric plasticizers and monomeric plasticizers would have been obvious motivated by the desire to further enhance the flexibility of the PVC base material.

13. Claims 3, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hishida (English translation of JP 05-202342) in view of Marongiu (US 4,503,184) as applied to claim 1 above, and further in view of Schwarcz (US 4,002,794), substantially as set forth in the Section 7 of 10/17/07 Office Action.

14. The invention of Hishida as modified by Marongiu is previously disclosed. Hishida as modified by Marongiu is silent as to teaching the adhesive is applied to the

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PVC sheet in the amount of 10 to 50 g/m² (claim 3), an adhesion promoter (claim 8), and a release layer (claim 9). However, Schwarcz teaches novel copolymeric materials suitable for use as a release agent or as a component in a release composition, and to methods of their preparation. More particularly the invention of Schwarcz relates to coated substrates having a surface coated therewith such as release liner and pressure sensitive adhesive tapes (column 1, lines 6-13). With respect to the claim 3, the weight of the pressure sensitive adhesive composition of Schwarcz is in the range of between about 0.5 to 4 ounces per square yard of backing member (column 12, lines 33-36) which equates to 16.95 grams per square meter to 136 grams per square meter (using 1 ounce = 28.35 grams and 1 square yard = 0.836 square meter). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the adhesive of Hishida using the disclosed coating weight of Schwarcz on the plasticized polyvinyl chloride sheet of Hishida, motivated by the desire to form the adhesive tape with suitable thickness of adhesive.

15. Regarding claim 8, Schwarcz teaches a primer coating on the backing before the adhesive composition is applied to the backing (column 12, lines 17-20) in order to improve the surface bonding characteristic of the backing to the pressure sensitive adhesive (column 11, lines 16-20). Therefore, it would have been obvious to provide adhesion promoter (primer) in the Applicant's claimed invention, motivated by the desire to improve the adhesion of the backing to the adhesive layer.

16. With respect to claim 9, Schwarcz teaches that a coating known as a release coat or back size is generally provided on the back side of the tape backing member i.e.

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the side opposite that on which the adhesive mass is applied in order to provide easy unwinding of the tape when it is provided in a roll form (column 1, lines 15-28). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a release coating of Schwarcz in the adhesive tape of Hishida, motivated by the desire to prevent the adhesive from sticking to the surface of the backing that is facing the adhesive when the tape is in a rolled form.

17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hishida (English translation of JP 05-202342) in view of Marongiu (US 4,503,184) as applied to claim 1 above, and further in view of Glennon (US 4,311,759), substantially as set forth in the Section 8 of 10/17/07 Office Action.

18. The invention of Hishida as modified by Marongiu is previously disclosed. Hishida as modified by Marongiu is silent as to teaching adhesive comprising antifoams, ageing inhibitors, and wetting agents. However, Glennon teaches a pressure sensitive adhesive composition comprising anti-oxidants (i.e. ageing inhibitors) to avoid the degradation of adhesive by oxidation (column 6, lines 55-56), antifoam agent to prevent the degradation of the adhesive (column 5, lines 65-68, column 6, lines 1-5), and a surface-active agent (i.e. surfactants) to improve the substrate or carrier wetting (column 7, lines 8-13). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the anti-oxidants, antifoam agents, and surface active agents of Glennon in the adhesive of Hishida as modified by

Marongiu, motivated by the desire to prevent the degradation of the adhesive and to improve the substrate wetting.

19. Claims 1, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donald (US 3,576,941) in view of Hishida (English translation of JP 05-202342) and Marongiu (US 4,503,184), substantially as set forth in the Section 9 of 10/17/07 Office Action.

20. Donald discloses a flat cable for distributing electrical power (abstract). Figure 4 of Donald discloses a stack of any number of flat conductor assemblies 44 (column 5 lines 44-64). Further, Figure 4 of Donald discloses bands 46 of adhesive tape that is used to restrain the aforementioned assemblies 44. The conductor assemblies 44 as shown in Figure 4 of Donald are bundled, protected, and sheathed by the adhesive tape 46.

21. Donald does not disclose a specific type of adhesive tape. Therefore, one in the possession of Donald would have to look elsewhere to provide for suitable adhesive tape. The inventions of Hishida and Marongiu are previously disclosed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the adhesive tape as disclosed by Hishida and Marongiu in the invention of Donald, motivated by the desire to provide suitable adhesive bands 46.

Response to Arguments

22. Applicant's arguments filed on 04/16/08 have been fully considered but are not found persuasive for the following reasons:

23. With respect to the 35 USC Section 103(a) rejections based on Hishida (English translation of JP 05-202342) in view of Marongiu (US 4,503,184), Applicant argues that the presently claimed invention and Hishida are directed to an adhesive tapes and/or sheets. Marongiu, on the other hand is directed to an aqueous dispersions of synthetic resins as binders in adhesive compositions for gluing two elements. According to Applicant, Marongiu relates to liquid glue formations, not adhesive tapes as disclosed in Hishida and required in the present claims. According to Applicant "There is no teaching or suggestion in Marongiu or in its combination of with Hishida that would have suggested that the formulation described in Marongiu is useful in solid form as a layer of an adhesive tape." According to Applicant absent such teaching or suggestion in Marongiu or its combination with Hishida, persons ordinary skill in the art would not have had a motivation to form a layer of the tape according to Hishida with the formulation described in Marongiu as alleged by the Patent Office. The Examiner respectfully disagrees for following reasons:

24. As to Applicant's arguments that there must be some teaching, suggestion, or motivation (TSM) in Marongiu or in its combination with Hishida to combine Hishida and Marongiu is not found persuasive in view of the recent decision by the Supreme Court in *KSR International Co. V. Teleflex Inc.* which negates this requirement. Additionally, the claim language is open ended (see "comprising") such that the claim language does

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not exclude a bonded adhesive tape (i.e. tape bonded to an adherent). The primary reference of Hishida is acrylic based (claim 2) and it is applied to a PVC backing. Additionally, Hishida discloses that one side of the PVC backing of his invention can be coated with the acrylic adhesive of his/her invention and another side of the PVC backing can be coated with another adhesive other than the one described in his/her invention (0023). The aqueous dispersion of the secondary reference Marongiu can be used as binders for the preparation of adhesive compositions suitable for joining or gluing two or more elements, and particularly suitable when at least one of the elements consists of a material which is difficult to glue such as polyvinyl chloride (abstract). Therefore, the adhesive formulation of Marongiu is specifically suitable for applying to PVC substrates. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the aqueous adhesive dispersion of Marongiu to coat the polyvinyl chloride backing of Hishida, motivated by the desire to form an adhesive tape with a suitable adhesive that is compatible with polyvinyl chloride backing. Accordingly, Applicant's arguments are not found persuasive.

25. Applicant asserts that Hishida's reference discloses unexpected anchoring effect between a vinyl chloride base material and the adhesive layer over time when shifting of the plasticizer from the base material to the adhesive layer is increased. According to Applicant this advantageous anchoring effect is caused by a cross-linking reaction formed in the acrylic resin-type adhesive agent by the stabilizer containing metal that has shifted with the plasticizer to the adhesive layer over time. Thus, Applicant argues that a person of ordinary skill in the art would not have been motivated to deviate from

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the teachings of Hishida's adhesive system to substitute a completely different adhesive system where such advantages might not be realized. The Examiner respectfully disagrees for the following reasons:

26. As stated previously, Hishida discloses that one side of the PVC backing of his invention can be coated with the acrylic adhesive of his/her invention and the other side of the PVC backing can be coated with another adhesive other than the acrylic adhesive (0023). The aqueous dispersion of the secondary reference Marongiu can be used as binders for the preparation of adhesive compositions suitable for joining or gluing two or more elements, and particularly suitable when at least one of the elements consists of a material which is difficult to glue such as polyvinyl chloride (abstract). Thus, the adhesive formulation of Marongiu is specifically suitable for applying to PVC substrates, and the primary reference of Hishida discloses such PVC substrates. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the aqueous adhesive dispersion of Marongiu to coat the polyvinyl chloride backing of Hishida, motivated by the desire to form an adhesive tape with a suitable adhesive that is compatible with polyvinyl chloride. It is also noted that Applicant has provided no factual evidence on the record that would indicate that the adhesive formulations of Marongiu can not be used in the invention of Hishida. Accordingly, Applicant's arguments are not found persuasive.

27. With respect to the art rejections based on Hishida in view of Marongiu and Schwarcz (US 4,002,794), it is noted that Applicant has generally asserted the same arguments as that of presented for Hishida in view of Marongiu, thus the Examiner's

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response set forth above is equally applicable with respect to this rejection as well. In addition it is noted that Applicant has asserted that "Specifically, Marongiu fails to teach or suggest the adhesive comprising aqueous dispersion of...40% to 70% by weight." (page 8 of Applicant's response submitted on 04/16/08). The Examiner respectfully disagrees because Marongiu discloses aqueous dispersion containing a mixture of a latex of a copolymer A of butadiene styrene and at least one unsaturated carboxylic acid, and a latex of a copolymer B of styrene and an alkyl acrylate, and if appropriate, at least one unsaturated carboxylic acid. The styrene alkyl acrylate copolymer of Marongiu comprises about 30 to 60% styrene (column 1 lines 50-56). Moreover the dispersion of Marongiu can be used as binders for the preparation of adhesive compositions suitable for joining or gluing two or more elements, and particularly suitable when at least one of the elements consists of a material which is difficult to glue such as polyvinyl chloride (abstract). Accordingly, Applicant's arguments are not found persuasive.

28. With respect to the art rejections to claims 1, 12, and 13, the Examiner respectfully reminds that these claims are rejected based on Donald (US 3,576,941) in view of Hishida and Marongiu, not Hishida in view of Marongiu and Donald (US 3,576,941) as asserted by Applicant. Further, with respect to the aforementioned rejection, Applicant argues that Donald does not teach or suggest "adhesive comprising aqueous dispersion of styrene-acrylic acid derivative copolymers having styrene fraction of from 40 to 70% by weight. The Examiner respectfully submits that Donald is not relied upon to teach this limitation; instead Marongiu is relied upon to teach this limitation. Accordingly, Applicant's arguments are not found persuasive.

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29. With respect to newly added claims 14-16, Applicant argues that Hishida discloses that when the molecular weight of the plasticizer is large it is difficult for the plasticizer that has shifted to the adhesive layer to transpire. Applicant concludes that Hishida teaches away from using of plasticizers that have large molecular weight such as polymeric plasticizers of claims 14 and 16, and claimed plasticizers of claim 15. The Examiner respectfully disagrees because Applicant's arguments are not commensurate in scope with the claimed invention. The claims do not require molecular weight of the plasticizer. Additionally, specification does not define or provide any guidance as to what is meant by "polymeric plasticizer" and/or "monomeric plasticizer". Further contrary to Applicant's arguments the prior art of Hishida discloses same plasticizers as that of used by Applicant (see 0015 of Hishida and page 6 lines 5-10 of Applicant's specification). Accordingly, Applicant's arguments are not found persuasive.

Conclusion

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

31. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./

Examiner, Art Unit 1794

/Hai Vo/

Primary Examiner, Art Unit 1794